SYLLABUS/ CURRICULUM

PANDIAN SARASWATHI YADAV ENGINEERING COLLEGE

(Approved by AICTE & Affiliated to Anna University, Chennai)

Madurai - Sivagangai Highway, Arasanoor, Thirumansolai Post, Sivagangai Dt. - 630 561, Tamilnadu
Mobile : 9842102628, 7373002628 Email: info@psyec.edu.in Website : www.psyec.edu.in

City Office : 10, Pandian Saraswathi St, Sivagami Nagar, Narayanapuram, Madurai - 625 014. Telefax- 0452 2682338, Mobile : 98423-02628

Department of Electrical And Electronics Engineering

Academic Year 2021-2022

VACEE2122PERES- Power Electronics System for Smart Grid Renewable Energy System using MATLAB

OBJECTIVE OF THE COURSE

- Understand the basic principles and components of power electronics, including diodes, transistors, thyristors, and their roles in power conversion processes.
- Learn the concept and features of smart grids and their significance in modern power systems.
- Develop skills in using MATLAB and Simulink for modeling, simulation, and analysis of power electronic systems and renewable energy systems.
- Understand the design, operation, and control of DC-DC converters (e.g., buck, boost, buck-boost) and their simulation in MATLAB/Simulink.

CHAPTER 1:

Introduction to Power Electronics and Renewable Energy Systems: Basics of power electronics-Key components: Diodes, transistors, thyristors-Power conversion: AC-DC, DC-AC, DC-DC, AC-AC-Types of renewable energy: Solar, wind, hydro, etc-Integration of renewable energy into the grid-Benefits and challenges of renewable energy-Definition and features of smart grids-Importance of smart grids in renewable energy-Key technologies in smart grids

CHAPTER 2:

MATLAB for Power Electronics and Renewable Energy: Basics of MATLAB programming Simulink environment and tools- Simulation basics: Building and running simulations- Basics of MATLAB programming- Simulink environment and tools-Simulation basics: Building and running simulations- Simscape Electrical Power System Analysis Toolbox-Renewable Energy Toolbox

CHAPTER 3:

Power Converters in Renewable Energy Systems: DC-DC Converters- Buck, boost, and buck-boost converters-Design and simulation in MATLAB/Simulink-Types of inverters: PWM, multilevel, etc-Grid-tied vs. standalone inverters-Simulation of inverters in MATLAB/Simulink- **AC-DC Converters (Rectifiers)**-Controlled and uncontrolled rectifiers-Simulation and analysis in MATLAB/Simulink-**AC-AC Converters-** Cycloconverters and matrix converters-Applications and simulation

CHAPTER 4:

Control Strategies for Power Electronics in Renewable Energy Systems: PWM control-MPPT (Maximum Power Point Tracking) techniques-Simulation and implementation in MATLAB/Simulink- Control of Inverters -Voltage and frequency control-Synchronization with the grid-Simulation in MATLAB/Simulink-Advanced Control Techniques-Fuzzy logic control-Neural network control-Adaptive control methods

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PANDIAN SARASWATHI YADAV
ENGINEERING COLLEGE
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CHAPTER 5:

Integration of Renewable Energy Systems into the Smart Grid: Smart Grid Technologies-Smart meters and advanced metering infrastructure (AMI)-Communication technologies for smart grids-Demand response and energy management systems-Grid Integration of Solar PV Systems-Solar PV system components and operation-Grid-tied PV system design and simulation-Impact of PV systems on the grid-Grid Integration of Wind Energy Systems-Wind turbine operation and components-Grid-tied wind energy system design and simulation-Impact of wind energy systems on the grid-Hybrid Renewable Energy Systems-Combining solar, wind, and other sources-Design and control of hybrid systems-Simulation of hybrid systems in MATLAB/Simulink

OUTCOMES:

- Gain proficiency in using MATLAB and Simulink for simulating power electronics and renewable energy systems.
- Learn various power converter topologies and their control strategies.
- Explore the integration of renewable energy systems into smart grids

Total: 35 hours

Course Coordinator **HOD/EEE** **PRINCIPAL**

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Department of Electrical And Electronics Engineering
Academic Year 2021-2022

VACEE2122PERES- Power Electronics System for Smart Grid Renewable Energy System using MATLAB

Course Schedule

Date	Time	TOPICS
01/12/2021	9.00 am to 12.30 pm 1.00 pm to 5.00 pm	**Introduction to Power Electronics and Renewable Energy Systems:** Basics of power electronics-Key components: Diodes, transistors, thyristors-Power conversion: AC-DC, DC-AC, DC-DC, AC-AC-Types of renewable energy: Solar, wind, hydro, etc-Integration of renewable energy into the grid-Benefits and challenges of renewable energy-Definition and features of smart grids-Importance of smart grids in renewable energy-Key technologies in smart grids
02/12/2021	9.00 am to 12.30 pm 1.00 pm to 5.00 pm	**MATLAB for Power Electronics and Renewable Energy:** Basics of MATLAB programming Simulink environment and tools- Simulation basics: Building and running simulations- Basics of MATLAB programming- Simulink environment and tools-Simulation basics: Building and running simulations- Simscape Electrical Power System Analysis Toolbox-Renewable Energy Toolbox
03/12/2021	9.00 am to 12.30 pm 1.00 pm to 5.00 pm	**Power Converters in Renewable Energy Systems: DC-DC Converters-** Buck, boost, and buck-boost converters-Design and simulation in MATLAB/Simulink-Types of inverters: PWM, multilevel, etc-Grid-tied vs. standalone inverters-Simulation of inverters in MATLAB/Simulink-**AC-DC Converters (Rectifiers)**-Controlled and uncontrolled rectifiers-Simulation and analysis in MATLAB/Simulink-**AC-AC Converters**-Cycloconverters and matrix converters-Applications and simulation
04/12/2021	9.00 am to 12.30 pm 1.00 pm to 5.00 pm	**Control Strategies for Power Electronics in Renewable Energy Systems:** PWM control-MPPT (Maximum Power Point Tracking) techniques-Simulation and implementation in MATLAB/Simulink- Control of Inverters -Voltage and frequency control-Synchronization with the grid-Simulation in MATLAB/Simulink-Advanced Control Techniques-Fuzzy logic control-Neural network control-Adaptive control methods
05/12/2021	9.00 am to 12.30 pm 1.00 pm to 5.00 pm	**Integration of Renewable Energy Systems into the Smart Grid:** Smart Grid Technologies-Smart meters and advanced metering infrastructure (AMI)-Communication technologies for smart grids-Demand response and energy management systems-Grid Integration of Solar PV Systems-Solar PV system components and operation-Grid-tied PV system design and simulation-Impact of PV systems on the grid-Grid Integration of Wind Energy Systems-Wind turbine operation and components-Grid-tied wind energy system design and simulation-Impact of wind energy systems on the grid-Hybrid Renewable Energy Systems-Combining solar, wind, and other sources-Design and control of hybrid systems-Simulation of hybrid systems in MATLAB/Simulink

Total Hours 35

Tea Break : 10:40 am to 10:55am & 02:45 pm to 15:00 pm
Lunch Break : 12:30pm to 01:00pm

Course Coordinator **HOD/EEE** **PRINCIPAL**

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Academic Year 2021 – 2022

One page Report

Name of the course : **Power Electronics System for Smart Grid Renewable Energy System using MATLAB**

Development Course Code : **VACEE2122PERES**

Course Coordinator : **Mr. D.Duraimurugan**

Date/Duration : 01.12.2021-5.12.2021— 35 hours

I here affirm that the Third and Final Year students of strength 23 have been taught the value-added course tittle "**Power Electronics System for Smart Grid Renewable Energy System using MATLAB**" as per the syllabus and completed within the stipulated time duration.

I confirm that the value-added course titled "**Power Electronics System for Smart Grid Renewable Energy System using MATLAB**" has been conducted in the beginning of the semester and course delivery along with the attendance of the students was recorded.

I confirmed that all the students were actively participated in the course and the eligible students were certified for the course.

Mr. D.Duraimurugan	**Mrs.S.Pandimeena,**	**Dr.R.RAJA,**
AP/EEE	**AP/EEE**	**Principal**
Course Co-Ordinator	**Head of the Department**	

Dr. R. RAJA M.E., Ph.D.,
PRINCIPAL
PANDIAN SARASWATHI YADAV
ENGINEERING COLLEGE
Arasanoor, Thirumansolai P.O-630 56
Sivagangai Dist, Tamil Nadu

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ASSESSMENT PROCEDURE

PANDIAN SARASWATHI YADAV ENGINEERING COLLEGE

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Department of Electrical And Electronics Engineering

Academic Year 2021-2022

VACEE2122PERES- Power Electronics System for Smart Grid Renewable Energy System using MATLAB

Assessment Questions with Answer

1. What is the primary function of a power electronics converter in a smart grid renewable energy system?

a) To increase power consumption

b) To convert electrical energy from one form to another

c) To store electrical energy

d) To generate electrical energy

Answer: b) To convert electrical energy from one form to another

2. In MATLAB/Simulink, which block is commonly used to simulate photovoltaic (PV) arrays?

a) Wind Turbine Block

b) Battery Block

c) Solar Cell Block

d) PV Array Block

Answer: d) PV Array Block

3. Which MATLAB toolbox is primarily used for designing and simulating power electronics systems?

a) Signal Processing Toolbox

b) Control System Toolbox

c) Simscape Electrical

d) Image Processing Toolbox

Answer: c) Simscape Electrical

4. What type of converter is typically used to connect a solar PV array to a DC bus in a smart grid system?

a) AC-AC Converter

b) DC-DC Converter

c) AC-DC Converter

d) DC-AC Converter

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Answer: b) DC-DC Converter

5. In a smart grid renewable energy system, what is the role of Maximum Power Point Tracking (MPPT)?

a) To increase the voltage output of the PV array

b) To decrease the current output of the PV array

c) To maximize the power output from the PV array

d) To convert DC to AC power

Answer: c) To maximize the power output from the PV array

6. Which MATLAB command is used to create a new Simulink model?

a) **new**

b) **simulink**

c) **model**

d) **create**

Answer: b) **simulink**

7. In a smart grid system, what type of inverter is commonly used to interface the renewable energy source with the AC grid?

a) Buck Converter

b) Boost Converter

c) Grid-Tied Inverter

d) Flyback Converter

Answer: c) Grid-Tied Inverter

8. In MATLAB/Simulink, how is a power electronics switching device like an IGBT typically represented?

a) As a resistor

b) As a transformer

c) As a semiconductor switch

d) As a capacitor

Answer: c) As a semiconductor switch

9. What is the purpose of using a filter in a power electronics system interfacing with the smart grid?

a) To increase the frequency of the output signal

b) To store energy for later use

c) To reduce harmonics and smooth the output waveform

d) To convert AC to DC

Answer: c) To reduce harmonics and smooth the output waveform

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10. Which MATLAB function is used to run a Simulink model from the MATLAB command window?

a) **run**

b) **start**

c) **simulate**

d) **execute**

Answer: a) **run**

11. In a smart grid context, what does the term "bidirectional inverter" refer to?

a) An inverter that can only convert DC to AC

b) An inverter that can only convert AC to DC

c) An inverter that can convert DC to AC and vice versa

d) An inverter that only works with renewable energy sources

Answer: c) An inverter that can convert DC to AC and vice versa

12. What is the main advantage of using MATLAB/Simulink for designing power electronics systems in smart grids?

a) High cost of software

b) Limited functionality

c) Ability to simulate and analyze complex systems accurately

d) Difficulty in learning and using the software

Answer: c) Ability to simulate and analyze complex systems accurately

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Department of Electrical And Electronics Engineering

Academic Year 2021-2022

VACEE2122PERES- Power Electronics System for Smart Grid Renewable Energy System using MATLAB

10/12

Assessment Test Paper

REGISTER NUMBER: 912018105301

NAME OF THE STUDENT: J. Manoj raj

1. What is the primary function of a power electronics converter in a smart grid renewable energy system?

a) To increase power consumption
b) To convert electrical energy from one form to another
c) To store electrical energy
d) To generate electrical energy

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b) DC-DC Converter
c) AC-DC Converter
d) DC-AC Converter

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In a smart grid renewable energy system, what is the role of Maximum Power Point Tracking (MPPT)?

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b) To decrease the current output of the PV array

c) To maximize the power output from the PV array

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11. In a smart grid context, what does the term "bidirectional inverter" refer to?

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An inverter that can only convert AC to DC

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d) Difficulty in learning and using the software

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Pandian Saraswathi yadav Engineering College,Arasanoor -630561

Department of Electrical and Electronics Engineering

Student Performance Sheet

Academic Year : 2021-2022

Cource Code : VACEE2122PERES

Course Name : Power Electronics System for Smart Grid Renewable Energy System using MATLAB

Duration of hours : 35

Period of Course : 01.12.2021-05.12.2021

Assessment Marks			Marks
Sl. No	Register Number	Student Name	
1	912019105001	T.BABU	95
2	912019105002	K.DINESH	94
3	912019105003	J.GODSON	86
4	912019105004	M.KAVIYARASU	88
5	912019105005	ALAN	80
6	912019105006	K.MOORTHY	82
7	912019105007	N	75
8	912019105008	A.SANJEEVKUMAR	83
9	912019105009	S.SATHISHKUMAR	85
10	912019105010	R.SIVANESAN	87
11	912019105012	M.SRIMALAVIKA	90
12	912019105013	M.VALLARASU	92
13	912018105001	S.ARUNKUMAR	93
14	912018105002	AN	95
15	912018105003	AKUMAR	80
16	912018105004	SJEEVA	86
17	912018105005	A.KAVINMATHI	85
18	912018105007	K.RAMADHARSHINI	84
19	912018105008	K.SARANYA	83
20	912018105009	R.SIVA RANJANA	82
21	912018105010	I.THAMIZHARASI	81
22	912018105011	M.VIJAYAKUMAR	80
23	912018105301	J.MANOJRAJ	80

Course coordinator HOD/EEE PRINCIPAL

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Department of Electrical And Electronics Engineering

Academic Year 2022-2023

VACEE2122PERES- Power Electronics System for Smart Grid Renewable Energy

ASSESSMENT MODE

In order to get a certificate for this course, the students should satisfy the following constraints

Attendance	: 75 %
Assessment Question	: MCQ pattern
Assessment Mark	: Greater than or equal to 50%

Course Coordinator **HOD/EEE** **PRINCIPAL**

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STUDENTS ATTENDANCE

Pandian Saraswathi yadav Engineering College,Arasanoor -630561

Department of Electrical and Electronics Engineering

Student Attendance Sheet

Academic Year : 2021-2022

Cource Code : VACEE2122PERES

Course Name : Power Electronics System for Smart Grid Renewable Energy System using MATLAB

Duration of hours : 35

Period of Course : 01.12.2021-05.12.2021

Attendance Sheet			Date:					
Sl. No	Register Number	Student Name	09.00 am - 10.00 am	10.00 am - 11.00 am	11.15 am - 12.15pm	01.00 pm - 02.00 pm	02.00 pm - 03.00 pm	03.15 pm -04.15 pm
1	912019105001	T.BABU						
2	912019105002	K.DINESH						
3	912019105003	J.GODSON						
4	912019105004	M.KAVIYARASU						
5	912019105005	MP.MADHANAGOPALAN						
6	912019105006	K.MOORTHY						
7	912019105007	M.PANTHEESWARAN						
8	912019105008	A.SANJEEVKUMAR						
9	912019105009	S.SATHISHKUMAR						
10	912019105010	R.SIVANESAN						
11	912019105012	M.SRIMALAVIKA						
12	912019105013	M.VALLARASU						
13	912018105001	S.ARUNKUMAR						
14	912018105002	S.P.BUVANEESWARAN						
15	912018105003	M.GOKULSARAVANA KUMAR						
16	912018105004	S.JEEVA						
17	912018105005	A.KAVINMATHI						
18	912018105007	K.RAMADHARSHINI						
19	912018105008	K.SARANYA						
20	912018105009	R.SIVA RANJANA						
21	912018105010	I.THAMIZHARASI						
22	912018105011	M.VIJAYAKUMAR						
23	912018105301	J.I.MANOJ RAJ						

Tea Break FN- 11:00 am to 11:15am & AN-03:00 pm to 03:15 pm

Lunch Break 12:15 pm to 01:00pm

Course coordinator HOD/EEE PRINCIPAL

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Pandian Saraswathi yadav Engineering College,Arasanoor -630561

Department of Electrical and Electronics Engineering

Student Attendance Sheet

Academic Year : 2021-2022

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Duration of hours : 35

Period of Course : 01.12.2021-05.12.2021

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1	912019105001	T.BABU	T.Babu	T.Babu	T.Babu	T.Babu	T.Babu	T. Babu
2	912019105002	K.DINESH	Dinesh	Dinesh	Dinesh	Dinesh	Dinesh	Dinesh
3	912019105003	J.GODSON	J.Godson	J.Godson	J.Godson	J.Godson	J.Godson	J.Godson
4	912019105004	M.KAVIYARASU	Kavi	Kavi	Kavi	Kavi	Kavi	Kavi
5	912019105005	MP.MADHANAGOPALAN	Madhan	Madhan	Madhan	Madhan	Madhan	Madhan
6	912019105006	K.MOORTHY	K.Moorthy	K.Moorthy	K.Moorthy	K.Moorthy	K.Moorthy	K.Moorthy
7	912019105007	M.PANTHEESWARAN	Pantheel	Pantheel	Pantheel	Pantheel	Pantheel	Pantheel
8	912019105008	A.SANJEEVKUMAR	Sanjeev	Sanjeev	Sanj	Sanj	Sanj	Sanj
9	912019105009	S.SATHISHKUMAR	Sathi	Sathi	Sathi	Sathi	Sathi	Sathi
10	912019105010	R.SIVANESAN	R.Sivanesh	R.Sivanesh	R.Sivanesh	R.Sivanesh	R.Sivanesh	R.Sivanesh
11	912019105012	M.SRIMALAVIKA	Sri	Sri	Sri	Sri	Sri	Sri
12	912019105013	M.VALLARASU	Valla	Valla	Valla	Valla	Valla	Valla
13	912018105001	S.ARUNKUMAR	Arun	Arun	Arun	Arun	Arun	Arun
14	912018105002	S.P.BUVANEESWARAN	Buvan	Buvan	Buvan	Buvan	Buvan	Buvan
15	912018105003	M.GOKULSARAVANA KUMAR	Gokul	Gokul	Gokul	Gokul	Gokul	Gokul
16	912018105004	S.JEEVA	S.Jeeva	S.Jeeva	S.Jeeva	S.Jeeva	S.Jeeva	S.Jeeva
17	912018105005	A.KAVINMATHI	Kavi	Kavi	Kavi	Kavi	Kavi	Kavi
18	912018105007	K.RAMADHARSHINI	Ra	Ra	Ra	Ra	Ra	Ra
19	912018105008	K.SARANYA	Saranya	Saranya	Saranya	Saranya	Saranya	Saranya
20	912018105009	R.SIVA RANJANA	Siva	Siva	Siva	Siva	Siva	Siva
21	912018105010	I.THAMIZHARASI	Thami	Thami	Thami	Thami	Thami	Thami
22	912018105011	M.VIJAYAKUMAR	Vija	Vija	Vija	Vij	Vija	Vijay
23	912018105301	J.I.MANOJ RAJ	Manoj	Manoj	Manoj	Manoj	Manoj	Manoj

Tea Break FN- 11:00 am to 11:15am & AN-03:00 pm to 03:15 pm

Lunch Break 12:15 pm to 01:00pm

Durai Murugan

Course coordinator **HOD/EEE** **PRINCIPAL**

Pandian Saraswathi yadav Engineering College,Arasanoor -630561

Department of Electrical and Electronics Engineering

Student Attendance Sheet

Academic Year : 2021-2022

Cource Code : VACEE2122PERES

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9	912019105009	S.SATHISHKUMAR						
10	912019105010	R.SIVANESAN						
11	912019105012	M.SRIMALAVIKA						
12	912019105013	M.VALLARASU						
13	912018105001	S.ARUNKUMAR						
14	912018105002	S.P.BUVANEESWARAN						
15	912018105003	M.GOKULSARAVANA KUMAR						
16	912018105004	S.JEEVA						
17	912018105005	A.KAVINMATHI						
18	912018105007	K.RAMADHARSHINI						
19	912018105008	K.SARANYA						
20	912018105009	R.SIVA RANJANA						
21	912018105010	I.THAMIZHARASI						
22	912018105011	M.VIJAYAKUMAR						
23	912018105301	J.I.MANOJ RAJ						

Tea Break FN- 11:00 am to 11:15am & AN-03:00 pm to 03:15 pm

Lunch Break 12:15 pm to 01:00pm

Course coordinator HOD/EEE PRINCIPAL

R RAJA

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Pandian Saraswathi yadav Engineering College,Arasanoor -630561

Department of Electrical and Electronics Engineering

Student Attendance Sheet

Academic Year : 2021-2022

Cource Code : VACEE2122PERES

Course Name : Power Electronics System for Smart Grid Renewable Energy System using MATLAB

Duration of hours : 35

Period of Course : 01.12.2021-05.12.2021

Attendance Sheet			Date:					
Sl. No	Register Number	Student Name	09.00 am - 10.00 am	10.00 am - 11.00 am	11.15 am - 12.15pm	01.00 pm - 02.00 pm	02.00 pm - 03.00 pm	03.15 pm -04.15 pm
1	912019105001	T.BABU	T.babu	T.babu	T.babu	T.babu	T.babu	T.babu
2	912019105002	K.DINESH	Dinesh	Dinesh	Dinesh	Dinesh	Dinesh	Dinesh
3	912019105003	J.GODSON	J.GODSON	J.GODSON	J.GODSON	J.GODSON	J.GODSON	J.GODSON
4	912019105004	M.KAVIYARASU	Kaviyar	Kaviya	Kavi	Kavi	Kavi	Kavi
5	912019105005	MP.MADHANAGOPALAN	Gopal	Gopal	Gopal	Gopal	Gopal	Gopal
6	912019105006	K.MOORTHY	K.Moorthy	K.Moorthy	K.Moorthy	K.Moorthy	K.Moorthy	K.Moorthy
7	912019105007	M.PANTHEESWARAN	Panthes	Panthes	Panthes	Panthes	Panthes	Panthes
8	912019105008	A.SANJEEVKUMAR	Sanjeev	Sanjeev	Sanjeev	Sanjeev	Sanjeev	Sanjeev
9	912019105009	S.SATHISHKUMAR	Sathish	Sathish	Sathish	Sathis	Sathis	Sathish
10	912019105010	R.SIVANESAN	R.Sivanesh	R.Sivanesh	R.Sivanesh	R.Sivanesh	R.Sivanesh	R.Sivanesh
11	912019105012	M.SRIMALAVIKA	Srimalavika	Srimalavika	Srimalavika	Srimalavika	Srimalavika	Srimalavika
12	912019105013	M.VALLARASU	Vallarasu	Vallarasu	Vallarasu	Vallarasu	Vallarasu	Vallarasu
13	912018105001	S.ARUNKUMAR	Arun	Arun	Arun	Arun	Arun	Arun
14	912018105002	S.P.BUVANEESWARAN	Bhuvan	Bhuvan	Bhuvan	Bhuvan	Bhuvan	Bhuvan
15	912018105003	M.GOKULSARAVANA KUMAR	Kumar	Kumar	Kumar	Kumar	Kumar	Kumar
16	912018105004	S.JEEVA	S.Jeeva	S.Jeeva	S.Jeeva	S.Jeeva	S.Jeeva	S.Jeeva
17	912018105005	A.KAVINMATHI	Kavin	Kavin	Kavin	Kavin	Kavin	Kavin
18	912018105007	K.RAMADHARSHINI	Rama	Rama	Rama	Rama	Rama	Rama
19	912018105008	K.SARANYA	Saranya	Saranya	Saranya	Saranya	Saranya	Saranya
20	912018105009	R.SIVA RANJANA	Siva	Siva	Siva	Siva	Siva	Siva
21	912018105010	I.THAMIZHARASI	Thamizh	Thamizh	Thamizh	Thamizh	Thamizh	Thamizh
22	912018105011	M.VIJAYAKUMAR	Vijay	Vijay	Vijay	Vijay	Vijay	Vijay
23	912018105301	J.I.MANOJ RAJ	Manoj	Manoj	Manoj	Manoj	Manoj	Manoj

Tea Break FN- 11:00 am to 11:15am & AN-03:00 pm to 03:15 pm

Lunch Break 12:15 pm to 01:00pm

Course coordinator HOD/EEE PRINCIPAL

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Pandian Saraswathi yadav Engineering College,Arasanoor -630561

Department of Electrical and Electronics Engineering

Student Attendance Sheet

Academic Year : 2021-2022

Cource Code : VACEE2122PERES

Course Name : Power Electronics System for Smart Grid Renewable Energy System using MATLAB

Duration of hours : 35

Period of Course : 01.12.2021-05.12.2021

Attendance Sheet			Date:					
Sl. No	Register Number	Student Name	09.00 am - 10.00 am	10.00 am - 11.00 am	11.15 am - 12.15pm	01.00 pm - 02.00 pm	02.00 pm - 03.00 pm	03.15 pm -04.15 pm
1	912019105001	T.BABU	T.babu	T.babu	T.babu	T.babu	T.babu	T.babu
2	912019105002	K.DINESH	Dhinesh	Dhinesh	Dhinesh	Dhinesh	Dhinesh	Dhinesh
3	912019105003	J.GODSON	J.GODSON	J.GODSON	J.GODSON	J.GODSON	J.GODSON	J.GODSON
4	912019105004	M.KAVIYARASU	Kavi	Kavi	Kavi	Kavi	Kavi	Kavi
5	912019105005	MP.MADHANAGOPALAN	Gopala	Gopal	Gopala	Gopala	Gopala	Gopala
6	912019105006	K.MOORTHY	KMY	KMY	KMY	KMY	KMY	KMY
7	912019105007	M.PANTHEESWARAN	Pantheesw	Pantheesw	Pantheesw	Pantheesw	Pantheesw	Pantheesw
8	912019105008	A.SANJEEVKUMAR	Sanjeev	Sanjeev	Sanjeev	Sanjeev	Sanjeev	Sanjeev
9	912019105009	S.SATHISHKUMAR	Sathish	Sathish	Sathish	Sathish	Sathish	Sathish
10	912019105010	R.SIVANESAN	R.Sivanesh	R.Sivanesh	R.Sivanesh	R.Sivanesh	R.Sivanesh	R.Sivanesh
11	912019105012	M.SRIMALAVIKA	Malavika	Malavi	Malavi	Malavi	Malavi	Malavi
12	912019105013	M.VALLARASU	Vallara	Vallar	Vallar	Valla	Valla	Vallaru
13	912018105001	S.ARUNKUMAR	Arun	Arun	Arun	Arun	Arun	Arun
14	912018105002	S.P.BUVANEESWARAN	Buvanes	Buvanes	Buvanes	Buvanees	Buvan	Buvanesa
15	912018105003	M.GOKULSARAVANA KUMAR	Sarava	Salava	Saravana	Sarava	Saravan	Saravan
16	912018105004	S.JEEVA	Sjeeva	Sjeeva	Sjeeva	Sjeeva	Sjeeva	Sjeeva
17	912018105005	A.KAVINMATHI	Kavin	Kavin Mathi	Kavin Mathi	Kavin Mathi	Kavin Mathi	Kavin Mathi
18	912018105007	K.RAMADHARSHINI	Rama	Rama	Rama	Rama	Rama	Rama
19	912018105008	K.SARANYA	Saranya	Saranya	Saranya	Saranya	Saranya	Saranya
20	912018105009	R.SIVA RANJANA	Siva	Siva	Siva	Siva	Siva	Siva
21	912018105010	I.THAMIZHARASI	Thamizh	Thami	Thami	Thami	Thami	Thami
22	912018105011	M.VIJAYAKUMAR	Vijaya	Vijaya	Vijaya	Vijaya	Vijaya	Vijaya
23	912018105301	J.I.MANOJ RAJ	Manoj	Manoj	Manoj	Manoj	Manoj	Manoj

Tea Break FN- 11:00 am to 11:15am & AN-03:00 pm to 03:15 pm

Lunch Break 12:15 pm to 01:00pm

Course coordinator HOD/EEE PRINCIPAL

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Enrollment Student Name List

Pandian Saraswathi yadav Engineering College,Arasanoor -630561

Department of Electrical and Electronics Engineering

Student Registration Sheet

Academic Year : 2021-2022

Cource Code : VACEE2122PERES

Course Name : Power Electronics System for Smart Grid Renewable Energy System using MATLAB

Duration of hours : 35

Period of Course : 01.12.2021-05.12.2021

Enrolled Students List			Signature
Sl. No	Register Number	Student Name	
1	912019105001	T.BABU	
2	912019105002	K.DINESH	
3	912019105003	J.GODSON	
4	912019105004	M.KAVIYARASU	
5	912019105005	MP.MADHANAGOPALAN	
6	912019105006	K.MOORTHY	
7	912019105007	M.PANTHEESWARAN	
8	912019105008	A.SANJEEVKUMAR	
9	912019105009	S.SATHISHKUMAR	
10	912019105010	R.SIVANESAN	
11	912019105012	M.SRIMALAVIKA	
12	912019105013	M.VALLARASU	
13	912018105001	S.ARUNKUMAR	
14	912018105002	S.P.BUVANEESWARAN	
15	912018105003	M.GOKULSARAVANA KUMAR	
16	912018105004	S.JEEVA	
17	912018105005	A.KAVINMATHI	
18	912018105007	K.RAMADHARSHINI	
19	912018105008	K.SARANYA	
20	912018105009	R.SIVA RANJANA	
21	912018105010	I.THAMIZHARASI	
22	912018105011	M.VIJAYAKUMAR	
23	912018105301	J.I.MANOJ RAJ	

Course coordinator **HOD/EEE** **PRINCIPAL**

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MODEL CERTIFICATES

PANDIAN SARASWATHI YADAV ENGINEERING COLLEGE

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Arasanoor, Thirumansolai Post, Sivagangai – Madurai Highway, Tamilnadu - 630 561

Value added course on

Power Electronics System For Smart Grid Renewable Energy System Using MATLAB

Organized by

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CERTIFICATE

This is Certify that .....K.NOORTHY..... From **Third/Final year EEE** has participated in the value-added course on Power Electronics System For Smart Grid Renewable Energy System Using MATLAB organized by the Department of Electrical And Electronics Engineering From 01.12.2021 to 05.12.2021 (35 Hours) at Pandian Saraswathi Yadav Engineering College, Sivagangai.

Mrs.S.Pandimeena
AP/EEE
Head of the Department

Dr.R.RAJA
Principal

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Date: 2024.07.16 11:52:01 +05'30'

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CERTIFICATE

This is Certify that .....S.ARUN KUMAR..... From **Third/Final year EEE** has participated in the value-added course on Power Electronics System For Smart Grid Renewable Energy System Using MATLAB organized by the Department of Electrical And Electronics Engineering From 01.12.2021 to 05.12.2021 (35 Hours) at Pandian Saraswathi Yadav Engineering College, Sivagangai.

Mrs.S.Pandimeena
AP/EEE
Head of the Department

Dr.R.RAJA
Principal

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Value added course on

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Organized by

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CERTIFICATE

This is Certify that .....K. SARANYA..... From **Third/Final year EEE** has participated in the value-added course on Power Electronics System For Smart Grid Renewable Energy System Using MATLAB organized by the Department of Electrical And Electronics Engineering From 01.12.2021 to 05.12.2021 (35 Hours) at Pandian Saraswathi Yadav Engineering College, Sivagangai.

Mrs.S.Pandimeena
AP/EEE
Head of the Department

Dr.R.RAJA
Principal

R RAJA Digitally signed by R RAJA Date: 2024.07.16 11:52:36 +05'30'